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| 10/647,818 | 08/22/2003 | David S. F. Young | 2056.025 | 3264 |

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| ART UNIT | PAPER NUMBER |
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| 1643 | |

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/647,818 | YOUNG ET AL. | |
| | Examiner | Art Unit | |
| | David J. Blanchard | 1643 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *13 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *1-22 and 29-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/22/03; 9/28/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. The preliminary amendment of 14 March 2005 has been entered in full.

### *Election/Restrictions*

2. Applicant's election without traverse of the invention of Group II, claims 23-28 in the reply filed on 13 February 2006 is acknowledged.

3. Claims 1-22 and 29-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

4. Claims 23-28 are under examination.

### *Information Disclosure Statement*

5. The Information Disclosure Statement (IDS) filed August 22, 2003 and September 28, 2005 have been considered in full and an initialed copy of the IDS's are included with this Office Action.

### *Specification*

6. The disclosure is objected to because of the following informalities:

a. At pg. 1, lines 6-7 need to be updated with the U.S. Patent number for USSN 09/727,361, field November 29, 2000, which is U.S. Patent 6,657,048. Applicant's cooperation is requested in reviewing the entire disclosure for additional US Application Serial numbers whose status has changed and require updating.

b. The use of the trademark SYPRO Ruby™ has been noted in this application (see specification pg. 32, line 20, pg. 33, line 20, pg. 36, line 3). It should be capitalized wherever it appears and be accompanied by the generic terminology. Applicant's cooperation is requested in reviewing the entire disclosure for additional trademarks that require correction.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Appropriate correction is required.

### *Claim Objections*

7. Claim 23 is objected to as being grammatically incorrect in the recitation "which expresses CD44 antigenic moiety...". Amending the claim to recite "which expresses a CD44 antigenic moiety" would overcome this objection.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

9. Claims 23-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 23-28 are indefinite in the recitation of "having the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621" in claim 23 because the exact meaning of the phrase is not known. The "identifying characteristics" that are shared by the claimed CD44 specific monoclonal antibodies and the monoclonal antibody produced by clone PTA-4621 are not defined by the claims and the specification does not provide a standard for ascertaining the requisite degree or nature of the "identifying characteristics". Does the phrase "having the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621" mean that the anti-CD44 monoclonal antibody has the same antigen specificity, epitope specificity, the same heavy and light chain sequences, internalization, immunogenicity, tumor growth inhibitory property, cytotoxic property, Fc receptor specificity/affinity, ability to mediate antibody-dependent cellular cytotoxicity (ADCC), activate cellular-dependent cytotoxicity (CDC) or is/are some other identifying characteristic(s) contemplated by the phrase? Further, given the circular language of claim 23, is the monoclonal antibody, which binds the CD44 antigenic moiety the antibody that has the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621? As written, one or ordinary skill in the art would not be reasonably apprised of the metes and bounds of the claimed invention.

b. Claim 23-28 are indefinite in the recitation "monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621" in claim 23. The specification at pg. 39, lines 15-23 discloses that the deposited biological material deposited with the ATCC under accession number PTA-4621 is hybridoma cell line H460-16-2, which produces

monoclonal antibody H460-16-2. The art teaches that a hybridoma is produced by the fusion between a B cell and a myeloma cell, which is a cancer cell that provides the resultant B cell-myeloma hybrid, or hybridoma, with the capacity to proliferate indefinitely where the hybridoma produces mouse antibodies of a single idiotype (i.e., the monoclonal antibodies produced from a given hybridoma are identical) (see Campbell et al, Biology, 5th ed. pg. 856, 1999). Are there other monoclonal antibodies encoded by the clone PTA-4621, is the clone genetically engineered such that other forms of monoclonal antibodies including chimeric and humanized monoclonal antibodies are "encoded" by the clone PTA-4621 or is the clone actually a hybridoma that secretes or produces monoclonal antibody H460-16-2? What other monoclonal antibody or antibodies are "encoded" by the clones deposited with the ATCC as PTA-4621 as presently claimed? As written, one skilled in the art would not be reasonably apprised of the metes and bounds of the claimed invention.

Amending claim 23 to recite "the monoclonal antibody produced by the hybridoma deposited with the ATCC as PTA-4621" would overcome this rejection, provided no new matter is introduced.

### *Claim Rejections - 35 USC § 112*

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

11. Claims 23-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The preliminary amendment filed 3/14/2005 has introduced NEW MATTER into the claims. As originally filed on 8/22/2003, claims 23-28 were drawn to a process for mediating cytotoxicity of a human tumor cell expressing a CD44 antigenic moiety on the cell surface comprising contacting said tumor cell with an isolated monoclonal antibody or antigen binding fragments thereof encoded by the clone deposited with the ATCC as Accession Number PTA-4621, whereby cytotoxicity occurs as a result of said binding and wherein the isolated monoclonal antibody or antigen binding fragments thereof are humanized, chimerized, murine or conjugated to a therapeutic moiety and the human tumor is selected from colon, ovarian, lung and breast. The preliminary amendment filed 3/14/2005 amended the claimed process to recite wherein the human tumor cell expressing a CD44 antigenic moiety on the cell surface is contacted with an isolated monoclonal antibody or antigen binding fragments thereof which bind to said expressed CD44 antigenic moiety, said antigenic moiety characterized as being bound by an antibody having the identifying characteristics of a monoclonal antibody encoded by the clone deposited with the ATCC as Accession Number PTA-4621. There is insufficient written support for the presently claimed subgenus of monoclonal antibodies that have the "identifying characteristics" of the monoclonal antibody produced by clone PTA-4621

because the "identifying characteristics" have not been clearly set forth in the as filed specification. Further, the specification at pp. 22-23, particularly pg. 23, lines 13-15, discloses that monoclonal antibody H460-16-2 (produced by clone PTA-4621) has superior anti-tumor properties in comparison with previously described anti-CD44 antibodies. Thus, the specification as filed does not clearly disclose or provide adequate guidance and direction to the presently claimed subgenus of anti-CD44 monoclonal antibodies that have the "identifying characteristics" of the monoclonal antibody produced by the clone deposited with the ATCC as PTA-4621. Applicant's reliance on a generic disclosure and possibly a single species (i.e., H460-16-2 monoclonal antibody produced by cell line H460-16-2 deposited with the ATCC as PTA-4621) or limited species does not provide sufficient direction and guidance to the currently claimed limitations. It cannot be said that a subgenus is necessarily described by a genus encompassing it and a species upon which it reads. See In re Smith 173 USPQ 679, 683 (CCPA 1972). See MPEP 2163.05 Changes to the Scope of Claims.

Instant claims 23-28 now recite limitations, which were not clearly disclosed in the specification as filed, and now change the scope of the instant disclosure as filed. Such limitations recited in newly added claims 23-28, which did not appear in the specification, as filed, introduce new concepts and violate the description requirement of the first paragraph of 35 U.S.C 112. Applicant is required to provide sufficient written support for the limitations recited in present claims 23-28 in the specification or claims, as filed, or remove these limitations from the claims in response to this Office Action.

***Priority***

12. The later-filed application (i.e., the instant application) must be an application for a patent for an invention, which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application Nos. 10/603,2003; 09/727,361; and 09/415,278, fail to provide adequate support in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Prior application numbers 10/603,2003, 09/727,361, and 09/415,278 do not provide adequate written support for the presently claimed subgenus of anti-CD44 antibodies having the relevant identifying characteristics of the monoclonal antibody produced by the clone deposited with the ATCC as PTA-4621 as discussed supra (see item no. 11 above). Accordingly, the effective filing date of claims 23-28 for purposes of applying prior art is deemed to be the filing date of the instant application, i.e., 8/22/2003.

Should the applicant disagree with the examiner's factual determination above, it is incumbent upon the applicant to provide the serial number and specific page number(s) of any parent application filed prior to 8/22/2003 which specifically supports the particular claim limitation for each and every claim limitation in all the pending claims

which applicant considers to have been in possession of and fully enabled for prior to the effective filing date of 8/22/2003.

***Claim Rejections - 35 USC § 102***

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 23-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Tarin et al [a] (US Patent 5,879,898, 5/17/1995, IDS reference filed 8/22/2003).

Claims 23-28 are being interpreted as drawn to a method of mediating cytotoxicity of a human tumor cell which expresses CD44 (i.e., "CD44 antigenic moiety") on the cell surface comprising contacting said tumor cell with an isolated monoclonal antibody or antigen-binding fragment thereof that binds CD44 and has the identifying characteristics of the monoclonal antibody encoded by the clone (hybridoma) deposited with the ATCC as accession number PTA-4621, whereby cell cytotoxicity occurs as a result of said binding and the monoclonal antibody or antigen-binding fragment thereof is humanized, chimeric or murine or is conjugated to a cytotoxic moiety, enzyme,

radioactive compound or hematogenous cell and the tumor is a colon, ovarian, prostate or beast tumor.

Tarin et al [a] teach that human CD44 expression is increased in various solid human tumors including breast, colon and bladder cancer and Tarin [a] teach a method of mediating cytotoxicity of said tumor cells comprising administering a monoclonal antibody or antigen-binding fragment thereof (i.e., Fv, (Fv)2, Fab, Fab', F(ab)2) to a patient, wherein the monoclonal antibody is chimeric, humanized, or murine as well as conjugated to a toxin, chemotherapeutic, or radioactive label and mediates antibody-dependent cellular cytotoxicity (ADCC) or activates complement-dependent cytotoxicity (CDC) (see entire document, particularly, columns 6-8, examples and Table 3). Thus, the administration of the CD44 specific monoclonal antibody or antigen-binding fragment thereof in human breast, colon and bladder cancer patients reads on contacting a human tumor cell that expresses CD44 because the administered antibody would bind CD44 expressed on the tumor cell surface. Further, due to the indefinite nature of the claims, the phrase "having the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621" is interpreted to mean that the claimed monoclonal antibody that binds CD44 (i.e., CD44 "antigenic moiety") and has any of the following characteristics: mediates cytotoxicity, inhibits tumor growth, mediates ADCC, and activates CDC, all identifying characteristics of the monoclonal antibodies taught by Tarin et al [a] as discussed above.

Thus, Tarin et al [a] anticipate the claims.

15. Claims 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Tarin et al [b] (WO 94/12631, published 6/9/1994).

Claims 23-28 and their interpretation have been described supra.

Tarin et al [b] teach that human CD44 expression is increased in various solid human tumors including breast, colon and bladder cancer and Tarin [b] teach a method of mediating cytotoxicity of said tumor cells comprising administering a monoclonal antibody or antigen-binding fragment thereof (i.e., Fv, (Fv)2, Fab, Fab', F(ab)2) to a patient, wherein the monoclonal antibody is chimeric, humanized, or murine as well as conjugated to a toxin, chemotherapeutic, or radioactive label and mediates antibody-dependent cellular cytotoxicity (ADCC) or activates complement-dependent cytotoxicity (CDC) (see entire document, particularly, pp. 13-16 and Table 3). Thus, the administration of the CD44 specific monoclonal antibody or antigen-binding fragment thereof in human breast, colon and bladder cancer patients reads on contacting a human tumor cell that expresses CD44 because the administered antibody would necessarily bind CD44 expressed on the tumor cell surface, whereby cytotoxicity results from said binding. Further, due to the indefinite nature of the claims, the phrase "having the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621" is interpreted to mean that the claimed monoclonal antibody that binds CD44 (i.e., CD44 "antigenic moiety") has any of the following characteristics: mediates cytotoxicity, inhibits tumor growth, mediates ADCC, and activates CDC, all identifying characteristics of the monoclonal antibodies taught by Tarin et al [b] as discussed above.

Thus, Tarin et al [b] anticipate the claims.

16. Claims 23-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Young et al [a] (US 2004/0001789 A1, priority to 11/29/2000, IDS reference filed 9/28/2005) or Young et al [b] (2004/0105815 A1, priority to 11/29/2000, IDS reference field 9/28/2005) or Young et al [c] (U.S. Patent 6,657,048, filed 11/29/2000, IDS reference filed 9/28/2005).

The applied references have a common inventor(s) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claims 23-28 and their interpretation have been described supra.

Young et al [a]-[c] each teach a method of mediating cytotoxicity of human tumor cells including colon, ovarian, lung or breast tumors comprising administering monoclonal antibody H460-16-2, produced by hybridoma PTA-4621, or an antigen-binding fragment thereof (i.e., Fv, (Fv)2, Fab, Fab', F(ab)2), wherein the monoclonal antibody is chimeric, humanized, or murine as well as conjugated to a toxin, chemotherapeutic, or radioactive label (see Young et al [a], entire document, particularly pp. 7-8 and the claims; Young et al [b], see entire document, particularly pp. 2-4 and Example 1 and claims 1-8; Young et al [c], entire document, particularly columns 3-5, 9,

20, and Table 5). Thus, monoclonal antibody H460-16-2 produced by hybridoma PTA-4621 and modified forms thereof (i.e., antigen-binding fragments, chimeric, humanized and conjugates) are species that read upon the presently claimed subgenus of antibodies and necessarily have all of the relevant identifying characteristics of the monoclonal antibody produced by the clone deposited with the ATCC as PTA-4621 because the antibodies are identical. Products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01.

Thus, Young et al [a]-[c] anticipate the claims.

17. Claims 23-28 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by copending Application No. 11/364,013 which has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the copending application, it would constitute prior art under 35 U.S.C. 102(e), if published under 35 U.S.C. 122(b) or patented. This provisional rejection under 35 U.S.C. 102(e) is based upon a presumption of future publication or patenting of the copending application.

This provisional rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not

the invention "by another," or by an appropriate showing under 37 CFR 1.131. This rejection may not be overcome by the filing of a terminal disclaimer. See *In re Bartfeld*, 925 F.2d 1450, 17 USPQ2d 1885 (Fed. Cir. 1991).

Claims 23-28 and their interpretation have been described supra.

Copending Application No. 11/364,013 teaches a method of mediating cytotoxicity of human breast, colon, ovarian and lung tumor cells comprising administering monoclonal antibody H460-16-2, produced by hybridoma PTA-4621, or an antigen-binding fragment thereof (i.e., Fv, (Fv)2, Fab, Fab', F(ab)2), wherein the monoclonal antibody is chimeric, humanized, or murine as well as conjugated to a toxin, chemotherapeutic, or radioactive label (see entire document, particularly Examples 8 and 10 and pp. 50-63 and claims). Thus, monoclonal antibody H460-16-2 produced by hybridoma PTA-4621 and modified forms thereof (i.e., antigen-binding fragments, chimeric, humanized and conjugates) are species that read upon the presently claimed subgenus of antibodies and necessarily have all of the relevant identifying characteristics of the monoclonal antibody produced by the clone deposited with the ATCC as PTA-4621 because the antibodies are identical. Products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01.

***Double Patenting***

18. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

19. Claims 23, 25 and 27 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 23, 25 and 27 of copending Application No. 10/810,165.

Instant claims 23, 25 and 27 are drawn to a process for mediating cytotoxicity of a human tumor cell which expresses a CD44 antigenic moiety on the cell surface comprising contacting said human tumor cell with an isolated monoclonal antibody or antigen binding fragment thereof, said antibody or antigen binding fragment thereof being an isolated monoclonal antibody or antigen binding fragment thereof which binds to said expressed CD44 antigenic moiety, said antigenic moiety characterized as being bound by an antibody having the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621, whereby cell cytotoxicity occurs as a result of said binding and wherein the monoclonal antibody or antigen-binding fragment thereof is murine or is conjugated with a member selected from the group consisting of cytotoxic moieties, enzymes, radioactive compounds and hematogenous cells.

Claims 23, 25 and 27 of copending Application No. 10/810,165 are also drawn to a method of process for mediating cytotoxicity of a human tumor cell which expresses a CD44 antigenic moiety on the cell surface comprising contacting said human tumor cell with an isolated monoclonal antibody or antigen binding fragment thereof, said antibody or antigen binding fragment thereof being an isolated monoclonal antibody or antigen binding fragment thereof which binds to said expressed CD44 antigenic moiety, said antigenic moiety characterized as being bound by an antibody having the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621, whereby cell cytotoxicity occurs as a result of said binding and wherein the monoclonal antibody or antigen-binding fragment thereof is murine or is conjugated with a member selected from the group consisting of cytotoxic moieties, enzymes, radioactive compounds and hematogenous cells.

Thus, claims 23, 25 and 27 of copending Application No. 10/810,165 are of identical scope of instant claims 23, 25 and 27.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

20. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

21. Claims 24, 26 and 28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 24, 26 and 28 of copending Application No. 10/810,165. Although the conflicting claims are not identical, they are not patentably distinct from each other because instant claims 24, 26 and 28 are drawn to a process for mediating cytotoxicity of a human tumor cell which expresses a CD44 antigenic moiety on the cell surface comprising contacting said human tumor cell with an isolated monoclonal antibody or antigen binding fragment thereof, said antibody or antigen binding fragment thereof being an isolated monoclonal antibody or antigen binding fragment thereof which binds to said expressed CD44 antigenic moiety, said antigenic moiety characterized as being bound by an antibody having the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as PTA-4621, whereby cell cytotoxicity occurs as a result of said binding, wherein the monoclonal antibody or antigen-binding fragment thereof is humanized or chimerized and wherein the human tumor cell is obtained from a tumor originating in a tissue selected from the group consisting of colon, ovarian, lung and breast tissue and claims 24, 26 and 28 of copending Application No. 10/810,165 are also drawn to said

process for mediating cytotoxicity of a human tumor cell, wherein the monoclonal antibody or antigen-binding fragment thereof is humanized or chimerized and wherein the human tumor cell is obtained from a tumor originating in a tissue selected from the group consisting of colon, ovarian, lung, prostate and breast tissue. Thus, instant claims 24, 26 and 28 would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made because it would have been obvious to apply the method of claims 24, 26 and 28 of copending Application No. 10/810,165 for mediating cytotoxicity of human colon, ovarian, lung or breast tumor cells.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

22. Claims 23-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10/403,516. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Instant claims 23-28 and their interpretation have been described supra.

Claims 1-6 of copending Application No. 10/403,516 are drawn to a method of mediating cytotoxicity of a human tumor cell which expresses gp96 on the cell surface comprising contacting said tumor cell with an isolated monoclonal antibody or antigen-binding fragment thereof encoded by the clone deposited with the ATCC as accession number PTA-4621 (interpreted as the monoclonal antibody produced by the hybridoma deposited as PTA-4621 and antigen-binding fragments produced therefrom), whereby

cell cytotoxicity occurs as a result of said binding and the monoclonal antibody or antigen-binding fragment thereof is humanized, chimeric or murine or is conjugated to a cytotoxic moiety, enzyme, radioactive compound or hematogenous cell and the tumor is a colon, ovarian, prostate or beast tumor. Thus, method of mediating cytotoxicity using the monoclonal antibody produced by hybridoma PTA-4621 and modified forms produced therefrom (i.e., antigen-binding fragment, humanized and chimeric antibodies) are species that read upon the subgenus of anti-CD44 antibodies having relevant identifying characteristics of the monoclonal antibody produced by the clone deposited with the ATCC as PTA-4621. Products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

23. Claims 23-28 are directed to an invention not patentably distinct from claims 1-6 of commonly assigned Application No. 10/403,516. Specifically, see above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned copending Application No. 10/403,516 discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the

conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

24. Claims 23-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 10/603,000 in view of Tarin et al [b] (WO 94/12631, published 6/9/1994). Although the conflicting claims are not identical, they are not patentably distinct from each other.

Instant claims 23-28 and their interpretation have been described supra.

Claims 1-8 of copending Application No. 10/603,000 are drawn to a method of treating a human tumor in a mammal comprising administering a monoclonal antibody or antigen-binding fragment thereof which binds to an antigen expressed by the human tumor, wherein the administered a monoclonal antibody or antigen-binding fragment thereof has the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as accession no. PTA-4621 (interpreted as the monoclonal

antibody produced by the hybridoma deposited as PTA-4621) wherein said administered monoclonal antibody or antigen-binding fragment thereof is conjugated to a cytotoxic moiety, a radioisotope, activates complement, mediates antibody-dependent cellular cytotoxicity, is a murine, chimeric or humanized antibody. Further, the monoclonal antibody produced by the clone deposited with the ATCC as accession no. PTA-4621 (H460-16-2) is disclosed as binding CD44 as evidenced by the specification. Claims 1-8 of copending Application No. 10/603,000 do not specifically teach wherein the human tumor is colon ovarian, lung or breast tumor tissue. This deficiency is made up for in the teachings of Tarin et al [b].

Tarin et al [b] have been described supra.

Claims 23-28 of the instant application are obvious variants of claims 1-8 of copending Application No. 10/603,000 in view of Tarin et al [b] because it would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to produce a method of treating human breast, colon and bladder cancer in a mammal comprising administering the monoclonal antibody produced by clone PTA-4621, or fragments, humanized and chimeric forms thereof and conjugates thereof wherein the antibody mediates antibody dependent cellular cytotoxicity or activates complement.

One of ordinary skill in the art would have been motivated to and had a reasonable expectation of success at the time then invention was made to produce a method of treating human breast, colon and bladder cancer in a mammal comprising administering the monoclonal antibody produced by clone PTA-4621, or fragments,

humanized and chimeric forms thereof and conjugates thereof wherein the antibody mediates antibody dependent cellular cytotoxicity or activates complement in view of claims 1-8 of copending Application No. 10/603,000 as evidenced by the specification and in view of Tarin et al [b] because claims 1-8 of copending Application No. 10/603,000 teach a method of treating a human tumor in a mammal comprising administering a monoclonal antibody or antigen-binding fragment thereof which binds to an antigen expressed by the human tumor, wherein the administered a monoclonal antibody or antigen-binding fragment thereof has the identifying characteristics of a monoclonal antibody encoded by a clone deposited with the ATCC as accession no. PTA-4621, which binds CD44 as evidenced by the specification and wherein said administered monoclonal antibody or antigen-binding fragment thereof is conjugated to a cytotoxic moiety, a radioisotope, activates complement, mediates antibody-dependent cellular cytotoxicity, is a murine, chimeric or humanized antibody and Tarin et al [b] teach that human CD44 expression is increased in various solid human tumors including breast, colon and bladder cancer. Therefore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to administer the CD44-specific monoclonal antibody produced by clone PTA-4621 or fragments, humanized and chimeric forms thereof and conjugates thereof for therapeutic benefit in human breast, colon and bladder cancer patients. Thus, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have to produce a method of treating human breast, colon and bladder cancer in a mammal comprising administering the monoclonal antibody produced by

clone PTA-4621, or fragments, humanized and chimeric forms thereof and conjugates thereof wherein the antibody mediates antibody dependent cellular cytotoxicity or activates complement in view of claims 1-8 of copending Application No. 10/603,000 as evidenced by the specification and in view of Tarin et al [b], which is a species of instant claims 23-28

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

25. Claims 23-28 are directed to an invention not patentably distinct from claims 1-8 of commonly assigned Application No. 10/603,000. Specifically, see above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned copending Application No. 10/603,000 discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon

the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

26. Claims 23-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5, 10-16, 20-21 and 24-28 of copending Application No. 11/364,013. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Instant claims 23-28 and their interpretation have been described supra.

Claims 5, 10-16, 20-21 and 24-28 of copending Application No. 11/364,013 are drawn to a method initiating antibody induced cellular cytotoxicity of cancerous cells in a human tumor tissue sample comprising contacting said human tumor tissue sample with the isolated monoclonal antibody encoded by a clone deposited with the IDAC as accession number 280104-06 (i.e., the monoclonal antibody produced by IDAC accession number 280104-06) or a cellular cytotoxicity inducing ligand thereof, which ligand is characterized by an ability to competitively inhibit binding of said isolated monoclonal antibody to its target antigen; and a method of treating a human tumor susceptible to antibody induced cellular cytotoxicity in a mammal comprising administering the isolated monoclonal antibody encoded by a clone deposited with the IDAC as accession number 280104-06 or a cellular cytotoxicity inducing ligand thereof, which ligand is characterized by an ability to competitively inhibit binding of said isolated monoclonal antibody to its target antigen, wherein the monoclonal antibody or ligand is conjugated to a cytotoxic moiety, a radioisotope, is humanized or chimerized or

activates complement (i.e., CDC) or mediates antibody dependent cellular cytotoxicity (ADCC); and a process for treating a human cancerous tumor which expresses human CD44 antigen comprising administering at least one monoclonal antibody or ligand that recognizes the same epitope or epitopes as those recognized by a hybridoma selected from hybridoma cell line H460-16-2 having ATCC accession number PTA-4621 and hybridoma cell line AR37A335.8 having IDAC accession number 280104-06, optionally in conjunction with at least one chemotherapeutic agent (i.e., interpreted as a cytotoxic moiety conjugated to the monoclonal antibody or ligand); and a method for initiating antibody induced cellular cytotoxicity of cancerous cells in a tissue sample selected from a human tumor comprising providing an anti-CD44 chimeric antibody or ligand thereof that is characterized by an ability to competitively inhibit binding of CD44 with the isolated monoclonal antibody encoded by the clone deposited with the ATCC as accession number PTA-4621 and a method or process of treating a human tumor which expresses CD44 comprising administering an anti-CD44 chimeric antibody or ligand thereof that is characterized by an ability to competitively inhibit binding of CD44 with the isolated monoclonal antibody encoded by the clone deposited with the ATCC as accession number PTA-4621. Thus, claims 5, 10-16, 20-21 and 24-28 of copending Application No. 11/364,013 are drawn to CD44 monoclonal antibody species that are characterized as binding the same eitope or epitopes (i.e., competitively inhibits) as those recognized by a monoclonal antibody produced by the clone deposited with IDAC as accession number 280104-06 and the clone deposited with the ATCC as accession number PTA-4621, which is merely one "identifying characteristic" of a the monoclonal

antibodies produced by clones 280104-06 and PTA-4621 and instant claims 23-28 are inclusive to a method or process for mediating cytotoxicity both *in vitro* and *in vivo*.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

27. Claims 23-28 are directed to an invention not patentably distinct from claims 5, 10-16, 20-21 and 24-28 of commonly assigned Application No. 11/364,013. Specifically, see above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned copending Application No. 11/364,013 discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

**Conclusion**

28. No claim is allowed.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Blanchard whose telephone number is (571) 272-0827. The examiner can normally be reached at Monday through Friday from 8:00 AM to 6:00 PM, with alternate Fridays off. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms, can be reached at (571) 272-0832. The official fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully,
David J. Blanchard
571-272-0827